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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,262	06/12/2000	KIYOHICO UCHIDA	99807MN	3573

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 02/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary**Application No.**

09/486,262

Applicant(s)

UCHIDA ET AL.

Examiner

Marc Jimenez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>15</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-7** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “the molded body” in line 6 which lacks proper antecedent basis.

Claim Objections

3. **Claim 1** is objected to because of the following informalities: the last two lines of claim 1 is redundant to the limitations described in lines 3-8. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. **Claims 1 and 2** are rejected under 35 U.S.C. 102(b) as being anticipated by Fuchs et al. (5,257,965).

Fuchs et al. teach that it is known in the prior art to use a paper feed roller (col. 1, lines 59-68 to col. 2, lines 1-3, Fuchs et al. specifically describes the roller of German Patent Disclosure Document DE 36 17 316 A1) comprising: a rotary shaft, a cylindrical roller portion comprising a mixture of hydraulic composition (col. 1, line 61) comprising a hydraulic powder (col. 1, lines 61-62 and lines 64-65; ie. “cements” are hydraulic compositions) and a non-hydraulic powder (col. 1, lines 67-68 to col. 2, line 1; ie. “fly ash” or “particles of crushed rock” are non-hydraulic powders) and a workability improver (col. 2, line 1; ie. “additives” or “activators”) and then curing and hardening the molded body (col. 1, line 62), the cylindrical roller portion being integrated with an outer periphery of the rotary shaft.

With respect to the limitation that the roller is prepared by “press molding”, “curing” and “hardening”, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, these limitations have not been given patentable weight.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. **Claims 3-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchs et al.

Fuchs et al. describes the prior art roller described above (Fuchs et al. specifically describes the DE 36 17 316 A1 document in col. 1, lines 59-68 to col. 2, lines 1-3).

Fuchs et al. does not specifically teach that the DE 36 17 316 A1 reference is formed by connecting a plurality of cylindrical molded bodies in a direction of the rotary shaft.

However, Fuchs et al. teach connecting a plurality of cylindrical molded bodies 4 in a direction of the rotary shaft 3.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the prior art roller described by Fuchs et al. in col. 1, lines 59-68 to col. 2, lines 1-3, with a plurality of cylindrical molded bodies in a direction of the rotary shaft, in light of the teachings of Fuchs et al., in order to provide roller sections that can be easily replaced without replacing the entire roller body as suggested by Fuchs et al. at col. 3, lines 43-45. Note the connecting core rod 14 and the end portions have interengaging shapes 5.

With respect to Claim 6, Fuchs et al. teach the invention cited above with the exception of the hydraulic composition having the claimed ranges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, note that the claimed composition does not further limit the structural features of the claimed roller. There is no structural difference from the claimed invention versus the structural features of the roller taught by Fuchs. The structural features of the claimed roller is a shaft and a cylindrical portion which is also taught by Fuchs.

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With respect to Claim 7, Fuchs et al. teach the invention cited above with the exception of using the claimed workability improvers.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to have used the claimed workability improvers because applicant has not disclosed that using the claimed workability improvers provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the workability improver taught by Fuchs et al. or the claimed workability improvers because both improvers perform the same function of increasing workability. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have selected the claimed material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See also *Ballas Liquidating Co. v Allied industries of Kansas, Inc.* (DC Kans) 205 USPQ 331. Note also that the claimed materials used does not further limit the structural features of the claimed roller. There is no structural difference from the claimed invention versus the structural features of the roller taught by Fuchs et al.

8. **Claims 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchs et al. in view of Kadomatsu et al. (4,587,699).

Fuchs et al. teach the invention cited above with the exception of press molding the molded bodies.

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Kadomatsu et al. teach press molding molded bodies in a roller (fig. 7c).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Fuchs et al. with press molding the molded bodies, in light of the teachings of Kadomatsu et al., in order to form a symmetrically shaped roller surface.

9. **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (5,649,362) in view of Rebres et al. (5,267,008).

Yamamoto et al. teach forming cylindrical green molded bodies by molding a mixture of a hydraulic composition comprising a hydraulic powder (col. 5, lines 3-7) and a non-hydraulic powder (col. 5, lines 32-35; ie. SiO₂ or “silica”) and a workability improver (col. 5, lines 24-27; ie. “improve their moldability”), releasing, curing and hardening the green molded bodies (col. 5, lines 3-5 and lines 55-59; the mixture starts off as muddy or pasty and is then hardened and cured because it becomes solid).

Yamamoto et al. teach the invention cited above with the exception of forming a plurality of press molded bodies each having a hole at a central portion by press molding, inserting a rotary shaft through the holes of the plurality of the bodies, and connecting the adjacent cylindrical bodies.

Rebres et al. teach forming a plurality of press molded bodies **81,82** each having a hole at a central portion by press molding, inserting a rotary shaft **83** through the holes of the plurality of cylindrical bodies, and connecting adjacent bodies.

It would have been obvious to one of ordinary skill in the art, at the time of the invention,

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to have provided the invention of Yamamoto et al. with forming a plurality of press molded bodies each having a hole at a central portion by press molding, inserting a rotary shaft through the holes of the plurality of the bodies, and connecting the adjacent cylindrical bodies, in light of the teachings of Rebres et al., in order to provide roller segments that can be individually replaced or repaired without having to removing or replacing the entire roller surface.

10. **Claims 12-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuchs et al. in view of Kadomatsu et al. and Keller (4,583,272).

Fuchs et al. teach the invention cited above (see specifically paragraph 7 above) with the exception of press molding the molded bodies and arranging two rotary shaft portions.

Kadomatsu et al. teach press molding molded bodies in a roller (fig. 7c).

Keller teaches two rotary shaft portions fig. 5-7.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Fuchs et al. with press molding the molded bodies, in light of the teachings of Kadomatsu et al., in order to form a symmetrically shaped roller surface.

Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Fuchs et al./Kadomatsu et al. with two rotary shaft portions, in light of the teachings of Keller, in order to provide shaft end portions that are individually replaceable or repairable without having to remove the entire shaft.

With respect to claim 14, official notice is taken that it is well known in the art to form a roller end by threading the roller end and then screwing the shaft portions.

11. **Claims 18-21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Rebres et al. and Takei.

Yamamoto et al. teach forming cylindrical green molded bodies by molding a mixture of a hydraulic composition comprising a hydraulic powder (col. 5, lines 3-7) and a non-hydraulic powder (col. 5, lines 32-35; ie. SiO(sub2) or “silica”) and a workability improver (col. 5, lines 24-27; ie. “improve their moldability”), releasing, curing and hardening the green molded bodies (col. 5, lines 3-5 and lines 55-59; the mixture starts off as muddy or pasty and is then hardened and cured because it becomes solid).

Yamamoto et al. teach the invention cited above with the exception of forming a plurality of press molded bodies each having a hole at a central portion by press molding, inserting a rotary shaft through the holes of the plurality of the bodies, connecting the adjacent cylindrical bodies, and arranging two rotary shaft portions.

Rebres et al. teach forming a plurality of press molded bodies **81,82** each having a hole at a central portion by press molding, inserting a rotary shaft **83** through the holes of the plurality of cylindrical bodies, and connecting adjacent bodies.

Keller teaches two rotary shaft portions fig. 5-7.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Yamamoto et al. with forming a plurality of press molded bodies each having a hole at a central portion by press molding, inserting a rotary shaft through the holes of the plurality of the bodies, and connecting the adjacent cylindrical bodies, in light of

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the teachings of Rebres et al., in order to provide roller segments that can be individually replaced or repaired without having to removing or replacing the entire roller surface.

Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Yamamoto et al./Rebres et al. with two rotary shaft portions, in light of the teachings of Keller, in order to provide shaft end portions that are individually replaceable or repairable without having to remove the entire shaft.

With respect to claim 20, official notice is taken that it is well known in the art to form a roller end by threading the roller end and then screwing the shaft portions.

12. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Rebres et al. and Takei as applied to claim 19 above, and further in view of Fuchs et al.

Yamamoto et al./Rebres et al./Takei teach the invention cited above with the exception of having a connecting core rod.

Fuchs et al. teach a connecting core rod 6.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Yamamoto et al./Rebres et al./Takei with a connecting core rod, in light of the teachings of Fuchs et al., in order to securely fasten the roll sections together.

Response to Arguments

13. Applicant's arguments with respect to **Claims 1-23** have been considered but are moot in view of the new ground(s) of rejection.

14. In response to applicant's argument that the prior art rolls are not used for paper feed rollers to be used in a fine machine such as a printer or facsimilie, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

15. Applicant argues that Yamamoto reference teaches sintering which is not curing or hardening, however in col. 5, lines 3-5 and lines 55-59 of Yamamoto, the mixture starts off as muddy or pasty and is then hardened and cured because it becomes solid.

16. The examiner maintains the official notice rejection above in accordance with MPEP 2144.03. Since applicant has not properly rebutted the prior art statement, this limitation is taken as admitted prior art (see MPEP 2144.03).

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Interviews After Final

18. Applicant note that an interview after a final rejection will not be granted unless the intended purpose and content of the interview is presented briefly, in writing (the agenda of the interview must be in writing) to clarify issues for appeal requiring only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

Contact Information

19. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies

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of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to

CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
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January 27, 2003


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